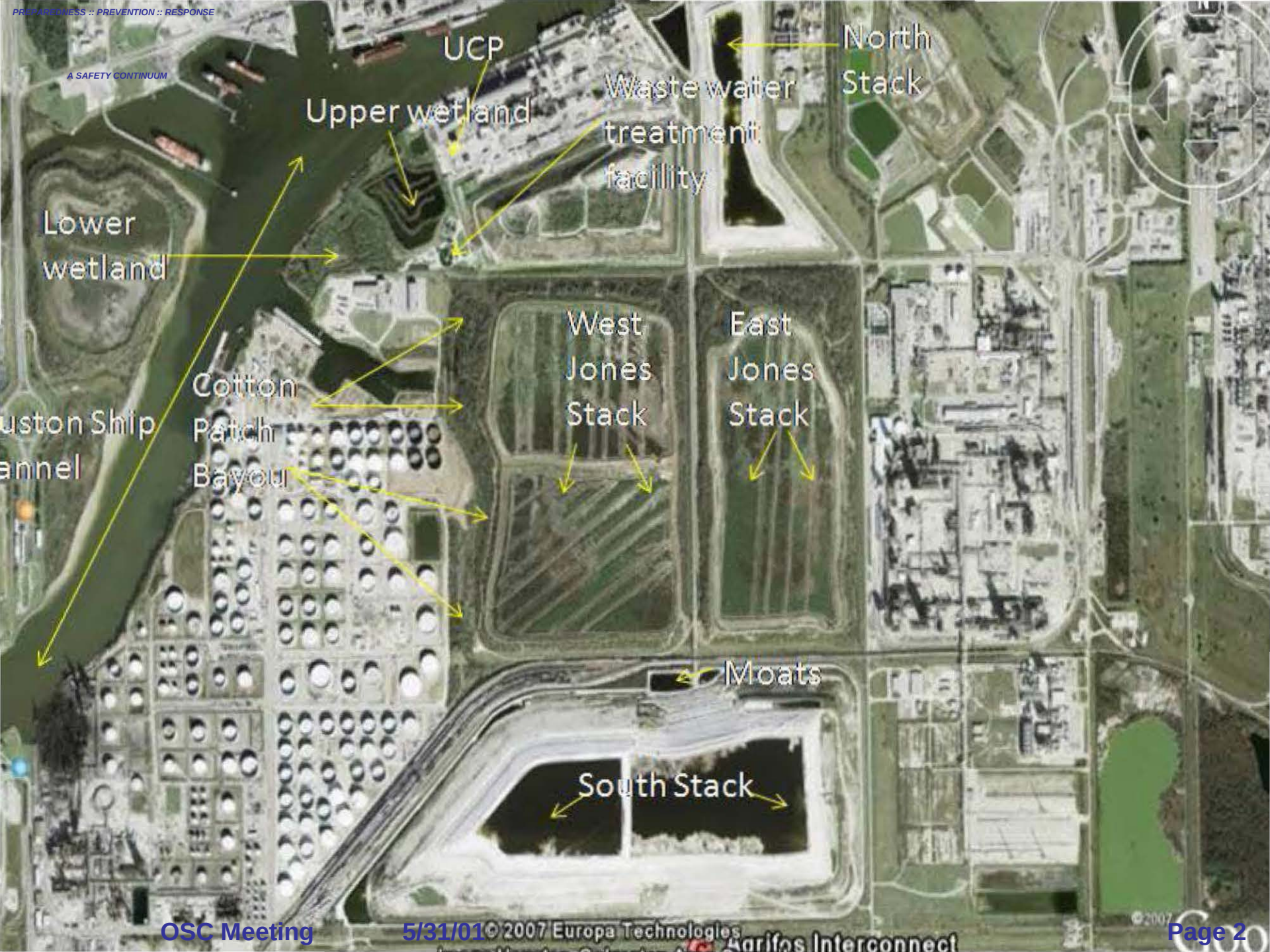
Agrifos Acid Spill

Pasedena, TX

9724444


UCP
North Stack
Upper wetland
Waste water treatment facility
Lower wetland
West Jones Stack
East Jones Stack
Cotton Patch Bayou
uston Ship annel
Moats
South Stack
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Background

- Phosphate fertilizer producer
  - Imports Phosphate Rock
  - Reacts rock with Phosphoric and Sulfuric Acids
  - Gypsum is a by-product of process
    - Gyp Piles created as a result
  - Gyp Piles produce Phosphoric Acid used in the process
- Facility has capacity to use 1.2 mgd of water
- 1” of Rainfall = 10 million gallons of water

Past Incidents

- 1992 - Catastrophic Release (Fife)
  - Mobil Mining owner
  - 45 million gallons of gyp and acid
  - Impacted Houston Ship Channel and Railroad
- Agrifos Florida Facility
  - Abandoned for FL and EPA R4 to cleanup (200 million spent thus far
- 2002 Hurricane Allison (Franklin and Zehner)
  - Retaining wall failure

Waste Characteristics

- High pH
- Metals
- High Ammonia
- Low concentrations of DNT (not specific to process, contaminated)
- Low level radiation
- LOTS OF IT (200 MILLION GALLONS)

RCRA

- Historically protected from “Bevel Exemption”
- Current EPA referral to DOJ for DNT making all hazardous waste

Incident

- Heavy rains filled surge capacity of ponds
  - Normal rain fall 60”/year, this year 94”

- Retaining wall started overtopping on August 16 stopped after a couple of days
- Early Sept. more rain received
- Retaining wall failed
- RP started illegally discharging to prevent additional retaining wall failure and potential catastrophic release
  - RP adding PR soda ash

Incident (Day 1)

- EPA received call from USCG on 9/6/2007
- Mobilized on 9/7/2007
- IC/UC implemented
  - EPA
  - USCG
  - TCEQ
  - RP (O'Brians Group)
- RP was responsible for IMT implementation

Day 1 (ramp up)

- USCG
  - NOAA
  - Gulf Strike Team
  - Media
- O'Brians Group
- EPA
  - START provided Structural Engineer
  - Requested NPDES Subject Expert
  - ERT, OECA consultations

Day 1 (cont)

- Structural engineer concluded that the retaining wall would hold
- RP discontinued the discharge at 6 PM
- IAP listed workgroups to develop storage, treatment, and disposal options as well as contingency plans to quickly dispose of 25 million gallons of water

Day 2-3

- Workgroups continued to evaluate storage, disposal, and treatment options
- Environmental Assessment begins
- EPA Emergency Response Notice of Consent issued
- Agrifos advises EPA and USCG of limited funds (2.4 million dollars
- USCG and EPA (responders) starting to realize options are limited

Day 4

- Ruhl to Regional office to drum up support of mounting problem
  - Superfund
  - Enforcement
- 1st RRT call
  - Advising them of situation and potential future needs
- RP gyp expert on site conducting inspection

Day 5

- IC/UC was issued report from RP gyp expert that eminent catastrophic release was likely
  - Indicated that at least 24” of freeboard was necessary
- IC/UC focus was directed to protecting the top of the stacks not the retaining walls
- USCG issues letter requiring the facility to take what ever steps they felt necessary to prevent catastophic release

Day 6

- Ruhl requests additional support
- Forecasted Weather Worsens
  - 0700 - possible 1”, isolated 4”
  - 0800 - up to 7” over the next 3 days
  - 0900 - Tropical disturbance 24 hours away
- 1000 - RRT Call
  - EPA takes lead on response
  - Tropical disturbance could dump as much as 15” of rain, 45 mph winds, possible tornadoes

Day 6

- 1300 – Tropical Storm Humberto forms expected to have a direct hit to facility
  - IC/UC developed Crisis Objectives
    - Readied all pumps to quickly remove water from top of stacks
    - Gyp expert indicated to prevent failure of stacks at least 48” of freeboard was necessary
- 1700 CERCLA UAO issued from Superfund to prevent stack failure
  - Input from Moore, Zehner, Carroll

Day 6

- 1700 – RP initiated the pumping of water from gyp stacks to gain as much freeboard as possible
- 2000 - RP maximized flow from WWTP to 1.2 mgd

Day 7

- 0005 - Hurricane Humberto goes East of facility
- 0205 - Ruhl requested RP to shut down all of the pumps
  - Water continued to be pumped from the retaining wall
- 0800 - IC/UC was notified that approximately 17-19 million gallons was discharged
  - RP was requested to continue the discharge of 3-5 mgd until recommended freeboard was achieved
- 1200 - Environmental assessment was initiated
- Zehner arrives on-scene

Day 8

- Moore, Enders, and Scott Wilson (NPDES Permitting) arrived
- RP continued to discharge
- Environmental Assessment on going
  - pH, dissolved oxygen
  - Water quality samples
  - Sample plan developed (TCEQ, START, NOAA)
  - RP Contractor lead, START augmenting and data management

Day 9

- Discharge from moat discontinued
- Discharge from WWTP continues
- EPA Moore and Wilson work on possible storage, disposal, and treatment options
- Zehner is assigned Dep. IC
- Enders is assigned accumulating EPA record of incident

Additional Actions

- Day 11 - Joint CERCLA/RCRA UAO issued
- Day 15 – Minimum freeboard successfully achieved
- Day 18 – Incident transitioned to RCRA Enforcement
  - WWTP went back to normal operation

Issues

- Getting EPA resources quick
- In EPA eyes, what is the RRT for…..
- When Authorities Collide who has authorities
  - OSC – NCP
  - Superfund – CERCLA
  - Enforcement – CWA, RCRA